

A periodical record of entomological investigation published at the Department of Entomology, University of Alberta, Edmonton, Alberta.

Volume 9

Number 1

2 January 1973

CONTENTS

Editorial — On Finality . . . . .	1
Griffiths — Studies on boreal Agromyzidae (Diptera). III. <i>Phytomyza</i> miners on <i>Cnidium</i> and <i>Conioselinum</i> (Umbelliferae) . . . . .	3
Steiner — Solitary wasps from subarctic North America — II. Sphecidae from the Yukon and Northwest Territories, Canada: Distribution and ecology . . . . .	13
Perrault — A taxonomic review of the eastern Nearctic species complex <i>Pterostichus (Haplocoelus) Adoxus</i> (Coleoptera: Carabidae) . . . . .	35
Book review . . . . .	41
Book review . . . . .	44
Book review . . . . .	47

Editorial — On Finality

Education means, by derivation, “a leading out” (*e* - out, *ducere* - to lead), by implication and usage it means a leading of a person out of the darkness of ignorance into the illumination of knowledge, understanding, and wisdom. Wisdom most importantly, for neither knowledge nor understanding constitute education, though they are essential ingredients of it. Phonograph discs and magnetic tape accumulate knowledge more efficiently than the mind of man; they do not understand, and are wise only in that they start in response to the right stimulus and stop, usually, when they come to the end.

An honest doctor once remarked that birth and death, the two temporal ends of a man, had little finality to them; that while a good doctor was usually pretty certain of a birth when he saw one, most of them were much less certain about the precise moment of death and admitted that the signing of a death certificate brought out the gambler in them. But birth, as the beginning of life, as witness the controversies over abortion, is also at best questionable. So it is with insects; more or less precisely so with such as *Glossina*. At first sight the egg-layers seem to start their lives with more precision, but surely life begins at fertilization, so what of parthenogenesis? Do we go back to the most recent sexually produced individual for the beginning? If a generation runs from fertilization to fertilization, as, in the context of evolution, it must, when we speak of alternation of generations we give it a different meaning. Different by a factor of two. But insect deaths are more dubious. Despite our vast investments in them, they still defy definition; ask any dabbler in the study of median lethal doses. Cryptobiosis and durable diapauses add further doubts.

The ends of an animal in space present problems of a different nature. Animal bodies seem reluctant both to begin and to end. The front end of an animal, that end which (usually) arrives first on the scene in the normal progress of the beast, is analogous to the beginning of life, and, like birth it is usually more clearly defined, more abrupt. But it is rarely completely abrupt; an advance guard of feelers, tentacles, antennae, or pseudopodia precedes the main bulk of the body. The essential quality of a tail is its taper, a reluctance,

as it were, to come to an end. Trailing appendages or receptors often keep it company in its reluctance. Of course a blunt beginning and a tapered finish are the essence of streamlining: some crustacea, unable to face up to this blunt beginning fold their two tapered ends together and allow them to trail behind the superbly rounded bluntness of their folded middles. Even the tails of those of us as have withdrawn them inside in embarrassment, are reluctant to face up to finality. Smaller vertebrae successively succeed each other in what Goethe called a gesture towards infinity. Morphologists recognize the reluctance of segmented animals to start and to finish by giving special names to the first and last pieces of the body, the acron and the telson. These parts really only differ from the segments in between them in having only one neighbour instead of two, and in doing their best to introduce the body and to bring things to an end.

Many forms of life have sidestepped the problem of beginning and ending by adopting a radial rather than a bilateral symmetry. But this only compounds the problem – they have to end in all directions instead of only in two, as witness the tapered arms of starfish. A solution to the problem for bilateral animals which does not appear to have been pursued is to join the two ends together to yield what one might call a ring worm; perhaps dogs and cheese-skippers which chase their tails are playing with this idea. Perhaps the incredible length of some nemertine worms of the genus *Lineus*, the bootlace worms, arises from a simple reluctance to face the problem of ending.

Plants have a masterly way of their own of coming to an end, best shown by trees. Both upwards and downwards, the extremities of these remarkable organisms combine tapering with branching, thus having more and more parts of less and less size until they wind up with a multitude of nothings. As in space, so also in time, plants take on life and give it up with becoming pause.

To return to education, leading out is a gradual process. So is graduation, at least by derivation, though it has become something of a sudden affair.

“Creatures animate with gradual life  
Of growth, sense, reason, all summed up in man.”

There are trends in education today divergent from Milton's view; but education – natural education – must be a gradual process, integrated with (and of course embodying the study of) life itself. Despite the element of repetition in it, the term ‘continuing education’ is a valid one, for knowledge grows continually faster and must continue to nourish wisdom. The finality of a final examination is antagonistic to education; life itself is the final examination of wisdom. So also terminal courses; they have no place in education until it is all over. The only truly terminal course is that from the funeral parlour to the graveyard or crematorium. A terminal course with a final examination is the end of everything.

Even an editorial must eventually come to an end. You might think that this is the end. Well, it is. Almost.

Brian Hocking